

JAY A. CHURCHILL, P. Eng.

EDUCATION

B.Sc.(Eng.) University of Guelph, Water Resources Engineering, 1985

Other
Courses: CNMP Element Writer Certification for Nutrient Management, Iowa State University,
Dept. of Agriculture and Biosystems Engineering, May 2008
CNMP Element Writer Certification for Manure and Wastewater Handling and
Storage, Iowa State University, Dept. of Agriculture and Biosystems Engineering,
September 2007
CNMP Element Writer Certification for Land Treatment Practices, Iowa State
University, Dept. of Agriculture and Biosystems Engineering, September 2007
Conservation Planning, Part 2 (Modules 6-8) USDA-NRCS, October 2006
Comprehensive Nutrient Management Plan Development Course, Iowa State
University, Dept. of Agricultural and Biosystems Engineering, November 2005
Conservation Planning, Part 1 (Modules 1-5) - USDA-NRCS, February 2005
Michigan/EPA Asbestos Building Inspector, Initial Training Course,
Jensen Environmental Training Services, Detroit, Michigan, November 2001
Conducting Comprehensive Environmental Property Assessments, Department of
Engineering Professional Development, University of Wisconsin - Extension, May 1993
Understanding Remediation, Department of Engineering Professional Development,
University of Wisconsin - Extension, March 1990
40-hour OSHA HAZWOPER training course (1987) and annual 8-hour refresher
courses complying with 29 CFR 1910.120

EMPLOYMENT

1993- Present	Project Manager Conestoga-Rovers & Associates
1990-92	Project Coordinator, Conestoga-Rovers & Associates
1986-90	Project Engineer, Conestoga-Rovers & Associates
1985-86	Junior Engineer, Totten Sims Hubicki Associates
1985	Environmental Technician, Ontario Ministry of the Environment

AFFILIATIONS

Association of Professional Engineers of Ontario

CURRENT POSITION WITH CRA

Project Manager/Senior Engineer:

- Responsible for management of all aspects of environmental and agri-environmental engineering projects, including investigations and assessments; environmental and civil construction; remediation, contract management; cost management; and invoicing to Clients

CONESTOGA-ROVERS & ASSOCIATES

EXHIBIT

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EXHIBIT

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JAY A. CHURCHILL

- Provides project management and technical assistance in CRA Agricultural Services Group. Prepares Comprehensive Nutrient Management Plans (CNMPs); prepares work plans for environmental engineering work, including conducting environmental assessments and identification of agricultural best management practices; conducts environmental assessments; and provides technical oversight of agricultural environmental investigation being conducted by a third party
- Ensures engineering projects are completed in a technically sound manner
- Coordinates effective interaction of various engineering and scientific groups and disciplines, such as engineering, agricultural services, hydrogeology, chemistry, and technical support, to promote successful project completion. Reviews work product of various groups to ensure project goals are achieved
- Arranges for the availability of appropriate personnel and resources
- Responsible for communication with regulatory agencies, client, and the project team

PROFILE OF PROFESSIONAL ACTIVITIES

Agricultural Services

- managed the completion of environmental assessments and identification of best management practices (BMPs) for surface water and groundwater protection at >200 swine facilities in North Carolina. Developed detailed priority ranking system for BMP implementation, which ensures BMPs will be implemented in an order which achieves maximum environmental benefits in the most cost effective manner. Prepared detailed BMP recommendation report
- prepared Comprehensive Nutrient Management Plans (CNMP) for several dairy and beef farms in Wisconsin
- researched and prepared report on Regulatory Foresight for the Biofuel Industry
- engineering QA oversight of HDPE liner installation for 10-acre agricultural waste storage pond at a large dairy in Oklahoma
- received CNMP Element Writer certification for Nutrient Management, Iowa State University
- received CNMP Element Writer certification for Manure and Wastewater Handling and Storage, Iowa State University
- received CNMP Element Writer certification for Land Treatment Practices, Iowa State University
- received certification for Conservation Planning, Parts 1 and 2, from United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS)
- through course work and attending training programs, working towards achieving full certification with USDA-NRCS as a Technical Services Provider and certified CNMP Planner

Design and Project Management of Remedial Construction

- Doepke-Holliday Superfund Site, Johnson County, Kansas (Superfund Site)
 - designed an impermeable multi-layer cap (synthetic liner and drainage net, soil, vegetative cover) over 35-acre site with significant grades
 - managed remedial construction activities associated with impermeable cap construction
 - currently managing long-term groundwater monitoring program, operation and maintenance (O&M) program, and associated USEPA reporting requirements

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- Former PCB Capacitor Manufacturing Plant, Indiana (USEPA and IDEM Site)
 - designed and managed remedial measures for the multi-phase cleanup of PCB-contaminated soils, creek sediments and concrete. Remedial measures included extensive soil excavation (60,000 c.y.); sequenced creek water diversion and sediment excavation; synthetic liner installations; PCB-capacitor segregation and packaging; concrete demolition; extensive shoring installation; building dismantling and reconstruction; off-site disposal of PCB-contaminated soils and sediments; and surface restoration
- Closure of Numerous Solid Waste Disposal Areas
 - designed remedial measures including excavation of solid wastes and codisposed soil; segregation of wastes from codisposed soil; segregation and off-site disposal or recycling of waste materials by waste type; backfilling of segregated soil; and surface restoration activities
 - managed remedial construction activities
 - Specific examples of key solid waste disposal area closure projects completed include:
 1. Lakeside Memorial Park, Miami, Florida, U.S.A. (100,000 c.y. of solid waste and soil) (1998 - 1999)
 2. Camposanto De Cristo Rescucitado, Ponce, Puerto Rico, U.S.A. (55,000 c.y. of solid waste and soil) (1997 - 1998)
 3. El Senorial Memorial Park, Rio Piedras, Puerto Rico, U.S.A. (5,700 c.y. of solid waste and soil) (1997)
 4. Spring Hill Cemetery, Nashville, Tennessee, U.S.A. (2,100 c.y. of solid waste and soil) (2003)
 5. Semper Concrete, Butler, Pennsylvania, U.S.A. (5,600 c.y. of solid waste and soil) (1998)
 6. Hillcrest Memorial Gardens, Cleveland, Tennessee U.S.A. (12,000 c.y. of solid waste and soil) (2000)
 7. Valley of the Temples Memorial Park, Kaneohe, Oahu, Hawaii (8,700 c.y. of solid waste and soil) (1999)
- Industrial Plant, Buffalo, New York (NYSDEC Site)
 - designed an asphalt cap cover system and vegetated soil cover system over an active industrial site
 - managed remedial construction activities
- Asbestos Abatement (Numerous Sites in Canada)
 - prepared asbestos abatement specifications, some abatement to be completed in conjunction with facility renovation or demolition, and managed abatement projects
 - prepared asbestos management plans (AMPs) for asbestos to remain in place
- Industrial Plant, Wisconsin (WDNR Site)
 - managed remedial activities conducted at a former manufactured gas plant site with coal tar contamination, including groundwater interceptor drain construction; construction of a steel sheet pile groundwater barrier wall; and construction of a groundwater pump and treatment system
- CIW Site, Romulus, Michigan (USEPA Site)
 - managed remedial activities conducted at a former oil recycling facility, including PCB-contaminated oil removal; sludge solidification and removal; tank demolition; and drummed waste repackaging and securement operations

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Nature and Extent of Contamination Investigations

- Former PCB Capacitor Manufacturing Plant, Indiana (USEPA and IDEM Site)
 - conducted an extensive PCB surface and subsurface soil and sediment sampling program; groundwater and surface water investigations; concrete coring; wipe sampling; and PCB air sampling
- CIW Site, Romulus, Michigan (USEPA Site)
 - drum sampling in a Level B work environment; tanked liquids sampling at this former oil recycling facility contaminated with PCBs
- Chemical Manufacturing Site, Charles City, Iowa
 - lagoon sludge sampling
- Numerous Underground Storage Tank (UST) Sites in the United States and Canada
 - confirmatory soil sampling and groundwater investigations for UST closures

Technical Review and Comment/Negotiation of Agency Orders/Consent Decrees/Remedial Actions

- Doepke-Holliday Superfund Site, Johnson County, Kansas (Superfund Site)
 - Consent Decree
- CIW Site, Romulus, Michigan (USEPA Site)
 - CERCLA 106 Order
- Shavers Farm Site, Walker County, Georgia (USEPA Site)
 - Removal Action completed by USEPA
- Novak Farm Site, New York (NYSDEC Site)
 - Removal Action completed by NYSDEC

Expert Testimony

- State of Oklahoma vs. Tyson Foods, Inc. et al.
 - prepared expert reports and testified in U.S. District Court regarding environmental media sampling oversight observations
- Doepke-Holliday Superfund Site, Johnson County, Kansas (Superfund Site)
 - participated in mediation sessions with client, remedial contractors, and judge to resolve large remedial construction contract settlement dispute

Cost Allocation in Support of Negotiations/Settlements

- CIW Site, Romulus, Michigan (USEPA Site)
 - evaluated costs incurred by client for remedial work required to be completed under a CERCLA 106 Order issued by USEPA, and assisted in preparation of client claim for reimbursement from USEPA
- Shavers Farm Site, Walker County, Georgia (USEPA Site)
 - critically evaluated USEPA expenditures associated with a large Removal Action completed by USEPA for which USEPA was seeking reimbursement from client
- Novak Farm Site, New York (NYSDEC Site)
 - critically evaluated NYSDEC expenditures associated with a large Removal Action completed by NYSDEC for which NYSDEC was seeking reimbursement from client

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- Large Energy Company (U.S.)
 - conducted a detailed evaluation of actual and potential environmental liabilities associated with in excess of 1,000 active and former energy company facilities

Miscellaneous Technical Work

- highly skilled in construction contract technical interpretation, enforcement, and administration
- prepared many contract documents and specifications for various investigative and remedial programs
- prepared work plans for hazardous waste and solid waste remedial and investigative programs
- prepared detailed engineering reports and environmental sampling and analyses reports for numerous hazardous waste and solid waste remedial construction projects, for submission to government regulatory agencies and industry
- prepared detailed cost estimates for remedial programs and environmental monitoring programs, under multiple scenarios and cost expenditure time frames
- prepared Environmental Indicator Determination (Current Human Exposures Under Control, and Migration of Contaminated Groundwater Under Control) documents meeting the requirements of USEPA's RCRA program
- prepared Health and Safety Plans for hazardous waste investigative and remedial programs
- prepared Spill Prevention Control and Countermeasure Plans (SPCCPs) and Stormwater Pollution Prevention Plan (SPPP)
- evaluated chemical composition of soils, groundwater, surface water, and waste materials, based on environmental and regulatory criteria

Key Field Remedial Construction and Related Experience

- supervised extensive remedial cleanup activities of PCB-contaminated soils, creek sediments and concrete. Remedial measures included extensive soil and sediment excavation (60,000 c.y.) and off-site disposal; sequenced creek water diversion and sediment excavation; synthetic liner installations; PCB-capacitor segregation and packaging; concrete demolition; extensive shoring installation to accommodate excavation to depth of 18 feet; building dismantling and reconstruction; and surface restoration
- supervised PCB-transformer decontamination and removal operations; PCB-contaminated soil removal; removal of tanked PCB-contaminated oils; PCB-capacitor packaging and removal; storage tank dismantling; and building demolition
- provided technical assistance and oversight during drum and contaminated soil excavation activities at a large drummed waste disposal site
- supervised segregation of hazardous liquid and solid chemicals in a supplied air modified "Level A" work environment within a former metal plating facility
- coordinated drum securement, sampling, waste classification, and drum removal operations at several sites
- supervised concrete coring operations inside a PCB-contaminated active plant facility
- supervised regrading operations and the construction of an impervious clay cover over an industrial landfill
- collected numerous soil, sediment, surface water, groundwater, concrete core, wipe, sludge, and air samples at numerous hazardous waste sites in the United States and Canada

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Other Training and Unique Experience

- former CRA internal Quality System (ISO 9001) auditor
- considerable experience in the installation and testing of synthetic liner systems
- experience in sheet pile installation for hydraulic containment and structural support
- experience in angle borings for subsurface soil sampling beneath structures
- completed Red Cross emergency first aid training and CPR courses

November 25, 2008